

ARUBA



Lago Oil & Transport Co., Ltd.

Aruba, Netherlands Antilles

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September 19, 1975

Joe R. Carroll Named Assistant Process Manager

Effective August 15, Joseph R. Carroll became Assistant Manager of the Process Department.

Joe began his Lago career in February 1962 after having gained expe-

sign Course, a General Electric Computer Programming Course in Phoenix, Arizona, an ER&E Process Control Course in Florham Park, N.J., and an I.E.S.A. Executive Management Program in Caracas.

Joe has been Board Chairman of the International Seamen's Club in San Nicolas for the past four years. He enjoys working with cub scouts, and repairing electronic equipment in his workshop at home in Seroe Colorado, or tinkering with his car. His other hobbies include bowling and golf.

Joe, his wife, Barbara, and their children Bill (11), Sharon (9) and Jim (7) spend all their vacations in Joe's homestate, Wyoming, where he owns a log cabin in the mountains and a lovely summer chalet-style home he and Barbara built in the woods last year. For a change of scenery, they go to the eastern part of Wyoming where Joe and a brother jointly own a small ranch.

rience with two U.S. Companies and serving for three years in the U.S. Army Chemical Corps, where he rose to first lieutenant. His first job at Lago was as an Engineer in the Technical-Process Division.

That same year he transferred to the Process Department as Technical Assistant and was promoted to Process Foreman in 1966. In 1967, after working several months in Technical-Process Engineering Division as Supervising Engineer, he returned to the Process Department to work on the startup of the Refining Division Control Center.

In 1969, Joe was assigned to Mechanical - M&C, Instrument, where he was promoted to Zone Supervisor in 1970. In November 1971 he returned to Technical - Process Engineering as Division Superintendent. Since then, he has headed several divisions in Technical, Mechanical, and Process, his latest assignment being in Process - Fuels Division.

A grammar and high school graduate of the Seroe Colorado School, Joe worked briefly at Lago as an Apprentice before studying in the U.S.A. in 1952. He graduated as a Chemical Engineer from the University of Colorado in 1955. At Lago, Joe followed many management courses. In Cali, Colombia, he attended a Process De-

J. R. Carroll



Aruba A Bira "Scamp Station" Pa Duna Servicio di Limpieza Na Tankeronan 24 Ora pa Dia

Aruba awor ta ariba e lista di como un docena di lugarnan rond di mundo cu ta duna un servicio special na bapornan. E servicio aki ta inclui limpiamento di "curpa" of kitamento di yerba, cocolishi of otro cosnan cu ta acumula na e parti ci bapornan cu ta den awa.

E equipo pa raspa e parti di bapor cu ta bao awa y hacié limpi y liso sin practicamente danja e capa di verf resistente yama SCAMP. E mashin tin tres brush di waya cu ta drazi e wiel cu ta move y e por haci un superficie di 6 pia hancho limpi unda e pasa. Un molina den centro di e unidad ta pusha e mashin pa e keda pegá na e bapor. E mashin por ser operá cu man door di un sambuyador cu tanki di oxígeno of por ser operá a control remoto for di un boto.

E trabao di limpiamento por ser terminá dentro di solamente 3 te 4 ora
(Continuá na pag. 7)

Calton A. Jackson Joins Management Ranks With Promotion to Engineering Technician

Effective September 1, Calton A. Jackson was promoted to Engineering Technician in Technical - Mechanical Engineering Division. With this advancement, Calton joined the ranks of management members.

A 1963 MULO-A graduate and a 1966 John F. Kennedy Technical School graduate, Calton worked at the Gebroeders Van Swaay Electric Installation Company and the Elmar Company before joining Lago's Pre-Employment Preparatory Program in 1969. That same year he was employed in the Mechanical Engineering Division as a Trainee I. The following year, Calton advanced to Junior Engineering Assistant B. In 1971, he was promoted to Jr. Engineering Assistant A.

In 1972, Calton moved to the Instrument/Electrical Zone where he was promoted to Equipment Tradesman A - Electrical the following year. Before his recent promotion Calton had been an Engineering Assistant A in

the Project Services Section.

Calton is currently following a CIE Industrial Electronic & Automation Course which he hopes to complete at the end of the year. A board member of the Estrella Club, he enjoys



C. A. Jackson

playing basketball and is basketball coach of a girls' team. He also likes to watch football, go swimming and dancing. He and his wife Livia and children, Jessica (6) and Omar (4) live in Santa Cruz.

ARUBALago Oil & Transport Co., Ltd.
Aruba, Netherlands Antilles

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J. C. Croeze



L. D. Tromp



R. Wever



S. Lumenier

Lago Students Achieve High Academic Standards In Their Field of Study at U. S. Universities

Good news is always welcome. Especially when it comes from abroad and concerns people from Aruba. More so, when the good news is about our young people doing well in an educational field. And when most of these young people are also Lago Scholarship students then the news is even better and more satisfying.

Although there is no definite formula for academic success, it seems that coming from Aruba may be significant. This was the case recently when Laurens D. Tromp, Ricardo Wever, Johannes C. Croeze and Gladys Chemaly were the four Arubans to graduate with honors from among 97 graduates at the Mitchell Junior College in New London, Connecticut.

In Bowling Green, Ohio, another Lago Scholarship student, Selvia Lumenier, also came into the spotlight when she was awarded a \$100 Fred Gerlach Award at the Bowling Green State University.

An engineering major in his third year at Mitchell's, LSF student Laurens Tromp was the winner of three major academic prizes at the annual awards assembly held at Clarke Center recently. He was given the George E. Watters Award as the outstanding engineering student, as well as the departmental merit award in both math and physics, and earned his associate in science degree with high honors.

Ricardo Wever, another LSF student, won the departmental prize in mathematics, while Johannes Croeze, a LEAP student, earned the David MacDonald Murray prize for perseverance and performance in engineering. Johannes had been employed in Mechanical - E.I.S. before leaving for the U.S.A.

These Lago Scholarship students and Gladys Chemaly were among the 29 students to be inducted into the Mitchell Society of Scholars.

At Bowling Green, Selvia Lumenier became the second female Aruban student at the University to be awarded the Gerlach prize as an outstanding foreign student who has contributed positively to intercultural exchange while maintaining a 3.0 or better academic average. A senior student, Selvia is specializing in the study of programs for deaf children.

The first young lady ever to receive this prize at Bowling Green — in 1972 — was Maria de la Caridad Maduro, also an LSF student, who received her B.S. degree in Business Administration, and who is Lago's first female accountant since last year.

Joe R. Carroll Nombrá Asistente Gerente di Departamento Process

Efectivo Augustus 15, Joseph R. Carroll a bira Asistente Gerente di Process Department.

Joe a cuminza su carrera cu Lago na Februari 1962 despues di haya experiencia cu dos compania Americaño y di sirbi tres anja den e Cuerpo Militar Químico Americano, caminda el a yega te na promer luitenant. Su promer trabao na Lago tabata como Ingeniero den Technical - Process Division.

E mesun anja ey el ■ transferi pa Process Department como Asistente Tecnico y a ser promoví pa Process Foreman na 1966. Na 1967, despues di traha varios luna den Technical - Process Engineering Division como Ingeniero Supervisorio, el a bolbe na Process Department pa traha arriba startup di Refining Division Control Center.

Na 1969, Joe a ser asigná na Mechanical - M&C, Instrument, caminda el a ser promoví pa Zone Supervisor na 1970. Na November 1971 el a bolbe na Technical - Process Engineering como Division Superintendent. For di e tempo ey, el a traha como hefe di varios divisionnan den Technical, Mechanical, y Process, y su mas reciente asignacion tabata den Process - Fuels Division.

Joe, kende a gradua for di Lagere School y High School na Seroe Colorado, a traha un corto tempo na Lago como aprendiz promer cu el a bai studia na Merca na 1952. El a gradua como Ingeniero Químico for di Universidad di Colorado na 1955. Na Lago, Joe a sigui varios curso di gerencia. Na Cali, Colombia, el a tuma ■ Process Design Course, e General Electric Computer Programming Course na Phoenix, Arizona, un ER &E Process Control Course na Flormham Park, y un Programa Ejecutivo pa Gerencia I.E.S.A. na Caracas.

Joe ta miembro di Directiva di International Seamen's Club na San Nicolas durante cuatro anja caba. El ta gusta traha cu Welpan, y drecha equiponan electronico den su "shop" of traha arriba su auto. Su otro hobby-nan ta inclui bowling y golf.

Joe, su casá Barbara, y nan yiulan Bill (11), Sharon (9) y Jim (7) ta pasa tur nan vacantienan na Joe su estado nativo Wyoming, caminda el tin un cabaña den montaña y un bunita cas di verano estilo suizo cual el y Barbara ■ construi den mondi anja pasá. Pa un cambio di ambiente, nanta bai e parti este di Wyoming caminda cu Joe y su ruman homber hunto tin un hacienda chikito.

Calton Jackson Ta Promovi Pa Engineering Technician; Ta Bira Miembro di Gerencia

Efectivo September 1, Calton A. Jackson n ser promovi pa Engineering Technician den Technical - Mechanical Engineering Division. Cu e promocion aki, Calton a drenta a rango di miembranan di gerencia.

Calton, kende a gradua di MULO-A na 1963 y for di John F. Kennedy School na 1966, a traha cu Gebroeders Van Swaay y cu Elmar promer cu el a join Lago su Programa Preparatorio pa Empleo na 1969. E mesun anja ey el a ser emplea den Mechanical Engineering Division como Trainee I. E siguiente anja, Calton a avanza pa Jr. Engineering Assistant B. Na 1971, el a ser promovi pa Jr. Engineering Assistant A.

Na 1972, Calton a muda pa Instrument/Electrical Zone caminda el a ser promovi pa Equipment Tradesman A - Electrical e siguiente anja. Promer cu su reciente promocion, Calton tabata un Engineering Assistant A den Project Services Section.

Calton actualmente ta siguiendo un curso di CIE tocante di Electronica Industrial y Automatizacion cual el ta spera di completa na fin di e anja aki. Un miembro di directiva di Club Estrella, el ta gusta hunga basketball y el ta entrenador di un team di mucha muher. Tambe el ta gusta waak wega di futbol, bai landa y baila. El y su casá Livia y yiunan, Jessica (6) y Omar (4) ta biba na Santa Cruz.

Lago Ta Regala e Tres Premionan Principal Den Gobierno su IV Exposicion di Arte Popular

Lago recientemente n anuncia su asistencia na Departamento di Cultura y Educacion den su IV Exposicion di Arte Popular fiha pa November 8 — 16 na Sociedad Bolivariana na Oranjestad. Mescos cu na 1972 y 1973, Lago lo regala e premionan na efectivo na e ganadornan principal den e exposicion: Fls. 500 pa e primer premio, Fls. 250 pa e segundo premio, y Fls. 150 pa e tercer premio. Ademas, Compania lo apoya Departamento di Cultura y Educacion den su campanja publicitario pa asina promote mas participacion den e evento venidero.

Lago ta tuma e oportunidad aki cu placer pa ser socio den e actividadnan cultural y den e desaroyo artístico den nos comunidad door di stimula mas interes y entusiasmo den e exposicion.

Cualquier residente di Aruba di 18



After receiving his two-thirds refund check, Dominico Henriquez is presented with his ICS certificate by Rotating Equipment Zone Supervisor A. L. M. Connor. On hand to congratulate Dominico is Shops & Facilities Superintendent Guy Alexander (r).



Despues di recibir su check di reembolso, Dominico Henriquez n ser presenta cu su certificado di ICS door di Rotating Equipment Zone Supervisor A. L. M. Connor. Presente pa felicitele ta Shops & Facilities Superintendente Guy Alexander (dr).

Dominico A. Henriquez Earns Certificate, Refund After Completion of ICS Course

In any endeavor, perseverance plays a very important role if the person really wants to succeed. Take the case of Dominico A. Henriquez of Mechanical - M&C, Rotating Equipment, who insisted on completing a Mechanical Engineering selected units course he began almost six years ago. From the thirty-three employees who began the ICS course in 1969, Dominico is the third employee to complete it.

Although he stopped studying several times during those years because of a temporary shift work assignment, and also because at times he was discouraged when the les-

sons became more difficult, Dominico nevertheless decided he would not drop out. He admits that he had to put in a lot of effort to study the 52 units in his spare time, but he can also tell of the great satisfaction he felt recently when he received his certificate through the mail.

This certificate was Dominico's reward in more ways than one. It also made him eligible for a two-thirds refund of the total expenses of the course under the Lago Educational Refund Program.

On August 25, he was presented this refund by Rotating Equipment Zone Supervisor A. L. M. Connor, in the presence of Shops & Facilities Superintendent Guy Alexander. This was Dominico's second educational refund from the Company. In 1965 he got two-thirds back of the cost of a Land Machinist Course which he took on his own time at the John F. Kennedy School.

An ATS graduate, Dominico Joined the Company in 1953 and attended the Lago Vocational School one year before being assigned to Mechanical - Machinist as a Machinist Helper.

Since 1971 he has been working as an Engineering Assistant A in the Rotating Equipment Section where he has put much of his recently acquired knowledge into practice.

anja pariba por participa den e exhibicion di arte aki, cu te cu dos obra di arte den cada categoria, manera pintura, artesanía, cerámica, borduur etc., cualnan no a ser exhibí anteriormente. Pa registra, participante nan mester yama Departamento di Cultura y Educacion na telefon 3207, di Dialuna pa Diabierna, entre 7:30 a.m. y 12 'or di merdia, y entre 1:30 p.m. pa 5 p.m. Ultimo dia pa registra ta 30 di September.

E obranan di arte mester ser entregá entre October 1 — 24. Ningun obra mas lo ser acceptá despues di October 24.

Manera anterior, e mejor obranan di arte lo ser eligí pa votacion popular mientras cu tambe lo tin premionan extra na ganadornan eligí door di un Comision Estético cu pronto lo ser formá.

Dominico, who also followed a Machinery Alignment Course here at Lago in 1972, does not plan to stop studying. He is still undecided which course he will follow, but he already knows for sure that he will try to finish it in less time.

Efficient Furnace and Boiler Operation Is Worth \$ 2.5 Million Per Year at Lago

Of all the energy consumed in a large complex refinery such as Lago, between 70 to 80% is hydrocarbon fuel that is burned in process furnaces and boilers. The generation of power from the steam produced in large boilers and the liberation of that heat in the process furnaces are important operations at Lago.

Excess Air Wastes Fuel

Oxygen is required to burn fuels. In the case of fired heaters this oxygen is obtained from the surrounding air, which is either pulled into the furnace by natural draft or blown in by large blowers. Air contains approximately 21% Oxygen and 79% Nitrogen and small amounts of other gases.

The oxygen in the air combines with the fuel in large burners releasing tremendous amounts of heat. This heat is transferred to the tubes and is absorbed by the fluids inside the tubes.

In theory, to burn a unit quantity of fuel, a certain fixed amount of air is required. In the most efficient combustion of fuel, the fuel is burned completely with no excess air so that there is no oxygen left over. In practice, however, a slight excess of air is always required for good combustion of the fuel. This excess for Lago type fuels amounts to approximately 20 to 30 percent over the minimum amount of air required. Although the goal of efficient combustion is to keep the excess air as low as possible, operating much below the targets shown above may result in incomplete combustion of the fuel, and/or flame impingement on the tubes which can result in local hot spots and coking. On the other hand, too much air entering the furnace causes wastage of fuel and energy. This can and must be controlled to a minimum. For example, assume that the amount of excess air is 100 percent over the minimum required amount. Then approximately 20 to 30% of the excess is required for good combustion and 70% of the excess (70 cu. ft. out of every 200 cu. ft. of total air) is taking a wasteful ride through the heater. The air enters the heaters at ambient temperature (approx. 83°F.) The cold air is heated up to subsequently leave the heaters through the stack at temperatures ranging from 400 to 1450°F. *It takes additional fuel (energy) to merely heat up this unnecessary air and put it back into the atmosphere. This additional energy is lost.*

By adjusting the air blowers to put less unwanted, excess air into the furnace or by adjusting the air registers on the burners the amount of heat loss will be reduced.

This can also be assisted by manipulating the damper in the stack to reduce the furnace draft. With less draft the amount of air pulled into the furnace will be reduced; thus reducing the loss of energy to heat up unwanted air.

Unwanted air also enters the heaters through leaks. It is essential to seal all existing leaks. Remember: All air which comes into the furnace must be heated. Air from leaks has been a significant cause of wasted energy. An optimum amount of excess air (20 — 30 percent) results in 4 to 5 percent oxygen remaining in the flue gas going to the stack after all the fuel has been burned.

Oxygen Measuring Instruments

Several instruments are used to determine the oxygen content in the flue gas. There are permanent analyzers installed at the inlet to the stacks on several furnaces. These analyzers continuously show the oxygen level in the stack gases. This allows the operator to trim the furnace whenever necessary to meet the 4 to 5 percent oxygen target. There are plans to eventually install these analyzers on all heaters.

In the interim period the operating personnel and members of the Energy Conservation Group are using portable oxygen measuring instruments to monitor heaters which do not have permanent analyzers.

Fuel Saving by Reducing Excess Air

The furnaces in the refinery vary in size from those firing about 45 million BTU/hour to the largest firing 370 million BTU/hour. (A BTU being the amount



Members of the Energy Conservation Team (Nard Peterson, Emiliano Trimon, Eddy Lacle Maduro (foreground) measure oxygen content with a portable oxygen analyzer at the top of the Furnace.

Energy Conservation Team members Emilio Trimon, Eric Dowling, Leonard Peterson, Edgar Maduro and Ruberd Barry observe the permanent stack oxygen analyzer reading after making adjustment on the furnace.



Miebranan di e Equipo di Conservacion di Energia Emiliano Trimon, Erick Dowling, Leonard Peterson, Edgar Maduro y Ruberd Barry obsevera loque e analizador di oxigeno permanente arriba a stack li registra despues cu nan a ahusta e fornu.

Energy Conservation Information

On August 25, 1975, an Energy Conservation Information system was installed. It is called "Dial-A-Saving" and is a telephone system. It is called "Dial-A-Saving" in a fold manner. On the Dial "5" system an emergency message is no emergency message. Energy suggests the existing Dial "3500" and "7" systems (the group will respond to the energy related question). System does not replace the existing information system. Encouraged to participate. Energy conservation is an important part of meeting the challenge.

Sistema di Informacion pa Conservacion de Energia.

Ariba Augustus 25, 1975, un Sistema di Informacion pa Conservacion de Energia. Es un sistema de telefon. Es la informacion tocante di energia disponible de la fuente di energia lo ser transmiti pa esnan cu juntas se renclanan, preguntanan y contestanan tocante di energia. El sistema "Dial 7" ya existente (Management System) contesta tur preguntanan relaciona cu energia. El sistema de Energia no ta reemplaza a sistemas ya existentes, pero do ta ser encurashá pa participa. Conservacion de Energia. Ser conciente ta un parti importante.



Adjusting the # 5 PS Crude furnace stack damper and observing the draft gauge reading are Eddy Laclé and R. Benjamin Lampe.



tem "Dial-A-Savings" Program

nation System was initiated on the Lago takes energy information available in a two-message will be broadcast to callers when there stions and answers are also encouraged for it Answers Your Questions). The ENCON This new Energy Conservation Information ema; it is an addition. All employees are empany-wide challenge. Awareness is an im-

Energia Programa "Dial-A-Savings" pa Conservacion di Energia a ser iniciá ari-A-Savings" (Yama-Pa-Spaar") y is haci ina. Ariba e sistema di "Dial "5" un mensa cu no tin un mensaje di emergencia. Sugeorgia ta encurashá tambe pa Dial "3500" ers Your Questions). E grupo ENCON lo sistema nobo di Informacion pa Conservacion informacion, esaki is bini acerca. Tur emplea- energia ta un desafio pa tur hende den com- m e desafio aki.

Operacion Eficiente di Fornu y Boiler Tin Valor di \$ 2.5 Milion pa Anja na Lago

Di tur energia consumi den un refineria grandi y compleho manera Lago, entre 70 cu 80% ta combustible hidrocarburo cu ta ser kimá den fornunan y boilernan di proceso. E generacion di energia for di stoom produci den boilernan grandi y e liberacion di calor den e fornunan di proceso ta operacionnan importante na Lago.

Aire en Exceso ta Gasta Combustible

Oxigeno ta requerí pa kima combustible. Den casonan di calentadornan cendi e oxigeno aki ta ser hayá for di e aire den ambiente, cual of ta ser halá den fornu door di un corriente natural of suplá aden door di supladornan grandi. Aire ta contene aproximadamente 21% di Oxígeno y 79% di Nitrógeno y cantidadnan chikito di otro gasnan.

E oxigeno den aire ta combiná cu e combustible den e kimadornan (burneran) descargando tremendo cantidadnan di calor. E calor aki ta ser transferí na e tubonan y ta ser absorbí door di e fluido den e tubonan.

En teoria, pa kima un cantidad unitario di combustible, un cierto cantidad fiho di aire ta requerí. Den e mas eficiente kimamento di combustible, e combustible ta ser kimá completamente sin aire en exceso pa asina no tin ningun oxigeno cu ta resta. En practica, sinembargo, un minimo exceso di aire semper ta ser requerí pa bon kimamento di combustible. E exceso aki pa combustiblenan di tiponan di Lago ta monta te na aproximadamente 20 pa 30% arriba e mínimo di cantidad di aire requerí. Aunque a meta di kimamento eficiente ta pa mantene e exceso di aire lo mas abao posible, operando mucho abao di e metanan indicá arriba, por resulta den kimamento incompleto di e combustible, y/of trece vlamnan den contacto cu e tubonan cual por resulta den partinan cayente of formamento di "coke". Den otro caso, demasiado aire drentando den e fornu ta causa desperdicio di combustible y energia. Esaki por y mester ser controlá te na un mínimo.

Por ehempel, supone cu e cantidad di aire en exceso ta 100 percent over di e cantidad mínimo requerí. E ora ey aproximadamente 20 pa 30% di e exceso ta requerí pa bon kimamento y 70% di e exceso (70 pia cúbico for di cada 200 pia cúbico di e total di aire) ta haciendo un pasada di desperdicio door di e calentador. E aire ta drenta a calentadornan na un temperatura ambiental (aproximadamente 83°F). E aire friew ta ser calentá pa despues sali di e calentadornan door di e chimenea na temperaturanan variando entre 400° pa 1450°F. Ta tuma combustible (energia) adicional pa simplemente calenta e aire innecesario aki y ponele bek den atmósfera. E energia adicional aki ta bai perdi.

Door di ahusta e supladornan di aire pa pone menos aire en exceso, no deseá, den e fornu of door di ahusta a registranon di aire arriba e kimadornan e cantidad di perdida di calor lo ser reduci. Esaki tambe por ser yudá door di manipula e regulador den e chimenea pa reduci e corriente di aire den e fornu. Cu menos corriente e cantidad di aire halá den e fornu lo ser reduci; asina reduciendo e perdida di energia pa calenta e aire no deseá.

Aire no deseá tambe ta drenta e calentadornan pa medio di leknan. Ta esencial pa seja tur leknan existente. Corda bon: Tur aire cu drenta den fornu mester ser calentá. Aire for di leknan ta un significante causa di energía desperdiciá. Un cantidad óptimo di aire en exceso (20 — 30 percent) ta resulta den 4 pa 5 percent di oxigeno cual ta keda den e gas di tubo y cual ta bai na e chimenea despues cu tur e combustible a ser kimá.

Instrumentonan pa Midi Oxígeno

Varios instrumentonan ta ser usá pa determina e volumen di oxigeno den e gas di tubo. Tin analizadornan permanente instalá na e entrada pa e chimeneanan arriba varios fornu. E analizadornan aki continuamente ta mustre e nivel di oxigeno den e gasnan di chimenea. Esaki ta permiti e operador pa ahusta a fornu ki ora cu ta necesario pa alcanzá e meta di 4 pa 5 percent di oxigeno. Tin plannan pa eventualmente instalá e analizadornan arriba tur calentador.

Mientrastanto e personal operador y miembronan di e Grupo di Conservacion di Energia ta usando instrumentonan portatil pa midi oxigeno pa controla calentadornan cualhan no tin analizadornan permanente.

(Continuá na pag. 8)



Venancio Solognier, Mechanical - Building Trades, receives his 30-year service emblem (Aug. 12) from Regional Supt. Illo Donata. Div. Supt. Hap Young is at left.



Bernardo Baptist, Technical - Lab. Inspection Section is presented his 30-year service award (August 13) by acting Division Superintendent Ed Hodges.



John Bishop, Process - Utilities, accepts 30-year certificate (Aug. 24) from Div. Supt. Henry Coffi in the presence of Assistant Process Manager Joe Carroll.



Juan Tromp, Mechanical-Metal Trades, is congratulated by M&C Division Superintendent L. S. F. Anjie on his 30th service anniversary (Aug. 27). At right, Edgar Coffi.



Marco Dirksz, Process-Fuels, is presented his 30-year service award by Division Supt. C. R. Rogers in the presence of friends, and Assistant Process Manager J. R. Carroll.



On returning from vacation, Bruno Koolman, Process - O.M., Floating Equipment, is presented his 25-year service watch (July) by Asst. Process Manager J. R. Carroll.



Efficient Furnace and Boiler Operation

(Continued from page 4)

of heat required to raise the temperature of one pound of water by 1°F at normal atmospheric conditions).

What is the economic driving force to reduce excess air in heaters?

As an example, take the case of a visbreaker furnace with a high stack temperature of 1450°F. Assume that at design firing rate of 216 million BTU's per hour the excess oxygen is 8 percent (approximately 60 percent excess air) and this is reduced to 4 percent excess oxygen, 20 percent excess air. The savings in fuel will amount to 15 percent or 5 barrels per hour. The fuel saved is worth \$ 950/day. Reducing excess air to furnace eliminates the greatest source of energy waste in the refinery.

When we add all of the 30 operating furnaces and boilers in Lago together the saving will amount to \$ 2.5 million a year.

At far left, Eligeno Krozendijk, Techn.-Lab. Inspection Section, is congratulated by Shift Supervisor Lucas Bergen, who hands him his 25-year service watch (August 14). In center picture, Moises F. Kusmus, Techn. - Process Technical Services, receives his 25-year service watch from Technical Manager Phil Griffiths on August 21. Above, Leo M. Gomez, Esso Marketing, O'stad Bunkers, accepts his 25-year service watch (August 25) from Esso Marketing Manager Frits Beaujon in the presence of Operations Supervisor Pedro Croes (l).



At left, the SCAMP machine is on deck of workboat "Mayra" with scuba-divers R. Corporan (at left), A. Zeegers (center) and R. Mathos ready to start cleaning operations on a VLCC after the machine is lowered into the water (at right).

Na robez, a mashin SCAMP ta cla na deck di bota "Mayra" cu sambuyadornan R. Corporan (na robez), A. Zeegers (centro) y R. Mathos tambe cla pa cuminza limpiamento di un tankero VLCC despues cu e mashin ser baha den awa (na drechi).



The 6-ft. diameter SCAMP is equipped with three rotating wire brushes and traction wheels for easy movement along the ship's hull.

E SCAMP di 6 pia den diameter tin tres brush di waya y wiel pa move riba curpa di e bapor.

Aruba Becomes a Scamp Station to Provide Around-the-Clock Hull Cleaning of Tankers

Aruba is now on the list of over a dozen places around the globe that provide special servicing to shipping. This service comprises the "body" cleaning or removal of grass, barnacles and other marine growth that accumulate on the submarine hull of ships.

The equipment to brush off the underwater hull to a smooth, clean finish with practically no damage to the heavy-duty coating is called SCAMP. The machine has three rotating wire brushes and traction wheels and can cut a path of 6 feet wide. An impeller at the center of the unit generates a thrust which keeps the machine against the hull. It can be operated manually by a scuba-diver or remote-

ly controlled from a launch.

The cleaning operation can be completed within as little as 3 to 4 hours or 6 hours in the case of a 150,000 DWT tanker.

This cleaning can take place while other port activities are in progress, such as loading, discharging or at anchor, while the operation is being monitored on the screen of a control console to ensure complete coverage. Costs are a fraction of any alternative method.

SCAMP cleaning of ships, especially VLCC's and MST's with steam propulsion plants, will result in substantial fuel savings because with a cleaner underwater hull the ship encounters less underwater friction and will cover more mileage thus saving fuel. For a VLCC, the effect of the average speed loss through unclean underwater hull on a basis of 320 days at sea per year is figured at 10 days transportation time per year. These 10 days converted in terms of operating cost amount to considerable savings.

The Aruba station, like all the worldwide network of Scamp cleaning stations, operates under contract to Butterworth System Inc. It is in charge of Peters Divers Company Ltd. which has a 55-ft. workboat "Mayra" and seven employees engaged in the new type of service being offered in Aruba.

The company can also handle underwater inspections, photography, welding, cutting, repairs and demolition work.

Since the SCAMP service began in Aruba in July this year, the Company has already performed cleanings of several tankers, including such giants like the VLCC's "Esso Europa", "Esso Dairiada" and "Esso Provence".

Stacion Scamp

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pa bapornan mas chikito of 6 ora si ta trata di un tankero di 150,000 ton. E limpiamento aki por ser haci també ora operacionnan den haaf ta tandomo lugar, manera durante cargoamento of descargamento, of ora e bapor ta ancrá y mientras e operacion ta ser controlá arriba un pantalla di control pa asegura cu tur parti ta ser limpia. E costo di e trabao aki ta mashá poco, compará cu otro sistema di limpiamento di bapor.

Limpamiento cu metodo Scamp, especialmente si ta trata tankeronan VLCC of MST cu tin motor di propulsión usando stoom, lo resulta den spaarmento considerable di combustible pasobra cu un "curpa" limpi e bapor por cubri mas milla y asina spaar combustible. Pa un tankero VLCC, e efecto di perdida promedio di velocidad pa motibo di curpa sushi ora e ta 320 dia nabegando ariba lama den un anja ta monta na 10 dia

di transporte den un anja. Si converti e 10 dianan aki den costo di operacion di e bapor nan ta yega na un spaarmento considerable.

E estacion di SCAMP na Aruba, mescos cu tur otro red di estacionnan SCAMP rond di mundo, ta opera bao un contract na Butterworth Systems Inc.

E estacion di Aruba ta na encargo di Peters Divers Company Ltd. cual tin un bota di 55 pia yamá "Mayra" y siete empleado cu ta duna e clase di servicio nobo aki ofrecí na Aruba. E compania tambe por haci trabao bao awa di inspección, fotografía, weldermento, cortamento, reparacion y demolicion.

Desde cu e servicio SCAMP a principia na Aruba na Juli e anja aki, e Compania ya a haci trabao di limpiamiento pa varios tankeronan, incluyendo algun gigantenan manera e VLCC-nan "Esso Europa", "Esso Dairiada" y "Esso Provence".



These management members, all LVB graduates, completing 30 years of service with Lago on September 3, pose here with their certificates presented to them in the Executive Conference Room. They are: (sitting): Arnold W. Beyde, Emilliano Flanegin and Julio B. Croeze. At rear: Hendrik Diaz, Benjamin E. Alders, Edgar Diaz and Juan C. Hermans. Not in picture are: Dominico D. S. Britten-Daniel V. Croes, Ebenezer Halley, Frits Maduro and Ivan Williams.



This group of LYS graduates received their 30-year service award in the Administration Building, Room # 2 on September 3; Sitting: Emile C. P. Jackson, Amado E. Kusmus, Hendrik A. Gibbs, Jerome F. Bryson. Standing: Juan O. Croes, Severiano Danje, Henry E. Dedler, Panchito Geerman, Lino F. Paskel, Juan Alberts, Alejandro Romp and Antonio M. Chirino. Not in picture: Herry Koolman and Rafael Semeleer.

Lago to Award Top Prizes To Winners in IV Exhibition Of Popular Art Nov. 8 - 16

Lago recently announced its assistance to the Department of Culture & Education in its IV Exhibition of Popular Art scheduled for November 8-16 at the Sociedad Bolivariana in Oranjestad.

Similar to 1972 and 1973, Lago will donate cash prizes to the top winners in the exhibition: Fls. 500 for the first prize, Fls. 250 for the second prize, and Fls. 150 for the third prize. In addition, the Company will support the Department of Culture & Education in its publicity campaign.

Lago welcomes this opportunity to be a partner in the cultural activities and artistic development of the community by stimulating more interest in the forthcoming event.

Any island resident of 18 years and up can participate in the art exhibit with up to two works of art in each category, such as painting, woodcraft, ceramics, embroidery, etc. not previously entered in the exhibition. To register, participants must call the Department of Culture & Education on telephone 3207, between 7:00 a.m. to 12 noon, and between 1:30 p.m. and 5 p.m. Last day to register is September 30. The art works must be turned in between October 1 — 24. No entries will be accepted after October 24.

The best art works on display will be selected by popular vote, while there will also be extra prizes to winners elected by a soon to be formed Esthetic Committee.



Miss Iran, Shorreh Niktour, elected Miss Teenage Intercontinental at the Americana Hotel on August 31, is flanked here by first runner-up Ingrid Centeno (Miss Venezuela) at left, and second runner-up Nivurti Nunim (Miss India at right). They are surrounded by several of the twenty-eight beauties who participated in this international event. The eight finalists were from Aruba, Austria, Ecuador, Guatemala, India, U.S.A., Iran and Venezuela. The successful event was transmitted live by Venevision of Caracas and Tele-Aruba. At far left is Maria Emilia de los Rios of Venezuela, the winner in 1974.

Operacion Eficiente di Fornu y Boiler

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Economia di Combustible door di Reduci Exceso di Aire

Fornunan den refineria ta varia den tamanjo for di esnan cu ta cende mas of menos 45 milion di BTU pa ora pa esnan mas grandi cu ta cende 370 million BTU pa ora. (Un BTU siendo e cantidad di calor necesario pa lanta e temperatura di un liter di awa na 1°F bao di condicionnan atmosférico normal).

Cual ta e forza impulsor económico pa reduci exceso di aire den calentadoran?

Como un ehempel, laga nos tuma e caso di un fornu visbreaker cu un temperatura halto di chimenea di 1450°F. Supone cu na razon di 216 milion BTU pa ora segun su disenyo di cendemento e exceso di oxigeno ta 8 percent (aproximadamente 60 percent di exceso di aire) y esaki ta ser reduci na 4 percent di exceso di oxígeno, 20 percent di exceso di aire. E economía ariba combustible lo monta na 15% of 5 bari pa ora. E combustible economizá tin un valor di \$ 950 pa dia. Reduciendo exceso di aire na fornunan ta elimina e fuentе mas grandi di desperdicio di energía den refineria.

Ora cu nos pone hunto tur e 30 fornunan y boilernan den operacion na Lago e economía lo monta na \$ 2.5 milion pa anja.